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| APPLICATION NO.         | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 10/644,640              | 08/20/2003  | Sung Dug Kim         | 135680-1            | 7530             |
| 7590                    |             | 11/10/2005           | EXAMINER            |                  |
| Robert E. Walter        |             | ROBERTSON, JEFFREY   |                     |                  |
| GE Plastics             |             | ART UNIT             |                     |                  |
| One Plastics Avenue     |             | PAPER NUMBER         |                     |                  |
| Pittsfield, MA 01201    |             | 1712                 |                     |                  |
| DATE MAILED: 11/10/2005 |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/644,640

Applicant(s)

KIM ET AL.

Examiner

Jeffrey B. Robertson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The finality of the previous office action has been withdrawn as a result of the rejection of claim 2 set forth below. This claim was not included in the rejection previously. The examiner apologizes for this oversight.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallucci et al. (U.S. Patent No. 6,300,399) in view of Gallucci et al. (U.S. Patent No. 5,596,049) and Fromuth et al. (U.S. Patent No. 4,264,487).

The '399 patent teaches a polyester molding composition that comprises a thermoplastic polyester resin that is an alkylene aryl polyester and an impact modifier. Col. 2, lines 9-60. Here, for claims 3 and 4, the reference teaches polyesters such as PET. The '399 patent teaches core-shell polymers as the impact modifier in column 3, lines 63-65. The '399 patent teaches antioxidants that include hindered phenol, phosphonite, and thioesters. The reference prefers that these antioxidants be used in combination with one another in an amount of up to less than 1% by weight of the entire mixture, which is within the range of claim 2. Col. 4, lines 58-62. Therefore, it would have been obvious to use a combination of antioxidants as required by claim 1. For

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claim 16, the reference teaches the addition of glass fiber in col. 4, line 54. For claims 19 and 20, the '399 patent teaches that articles for electrical equipment are made. Col. 6, lines 10-52. For claim 2, Gallucci teaches the presence of a mold release agent in col. 4, line 52. Although Gallucci does not expressly teach the amounts of (h), this appears to be a result effective variable dependent on the amount of mold release desired.

The '399 patent fails to expressly teach core-shell polymers where the core is derived from an acrylate having 4-12 atoms or the addition of a difunctional epoxy compound.

For claims 1 and 11-15, the '049 patent teaches the addition of difunctional epoxy compounds and catalysts to polyester molding compositions in order to improve hydrolytic stability and melt viscosity. Col. 2, lines 47-54. The reference teaches that the epoxy compound is bis(3,4-epoxycyclohexylmethyl) adipate, catalysts including alkali metal salts of carboxylic acids, and that the catalyst is added in an amount of 0.01 to 1 weight percent. Col. 5, line 15 through col. 6, line 13.

For claim 2, Fromuth teaches the addition of a mold release in col. 3, line 38. For claims 9 and 10, Fromuth teaches core-shell polymers falling within applicant's definition in col. 2, line 58 through col. 3, line 15. Fromuth teaches that butylacrylate is used in col. 4, line 36. The size of the acrylic rubber is believed to be an inherent property of the cores when synthesized in this manner.

The '399 patent, the '049 patent, and Fromuth are analogous art in that they all teach polyester molding compositions containing impact modifiers and other additives. It

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would have been obvious to one of ordinary skill in the art at the time of the invention to use the diepoxy compounds and catalysts of the '049 patent in the compositions of the '399 patent. The motivation would have been that the '049 patent teaches that these additives improve hydrolytic stability and melt viscosity. It also would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the core-shell polymers taught in Fromuth in the compositions of the '399 patent. The motivation would have been that Fromuth teaches advantages of the core-shell polymers in the patent in terms of thermal stability in col. 1, lines 33-47.

For claims 17 and 18, the references fail to teach the properties set forth in these claims. However, it appears that these properties would be inherent to the compositions produced through the combination of references as described above. "[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. In *re* Fitzgerald, 619 F. 2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re* Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

4. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallucci et al. (U.S. Patent No. 6,300,399) in view of Gallucci et al. (U.S. Patent No.

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5,596,049) and Fromuth et al. (U.S. Patent No. 4,264,487) as applied to claim 1 above, and further in view of Pixton et al. (U.S. Patent No. 6,187,848).

The limitations of claim 1 are taught as explained above. The '399 patent fails to expressly teach the limitations of claims 5-8.

Pixton teaches polyester molding compositions that contain stabilizers similar to those taught above. Pixton teaches the specific thioesters required by claims 5 and 6 in col. 5, lines 13-60. Pixton teaches the phosphonites required by claims 7 and 8 in col. 6, lines 1-25.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the thioester and phosphonite stabilizers set forth by Pixton as the specific stabilizers set forth in the '399 patent. The motivation would have been that the '399 patent teaches the genus of each of these stabilizers, but does not teach specific species. One of ordinary skill in the art would have turned to Pixton for that information.

### ***Response to Arguments***

5. Applicant's arguments filed 10/31/05 have been fully considered but they are not persuasive.

Applicant's arguments are persuasive to the extent that the claims are directed to phosphite stabilizers. The examiner appreciates the clarifications that the additional examples to which applicant refers in the previous response are those set forth in Example 2 and Table 3. However, since the claims also allow for the presence of a phosphonite stabilizer as an alternative to the phosphite stabilizer and the examples in the specification only set forth phosphite stabilizers, applicant's arguments are not

commensurate in scope with the instant claims. Therefore the rejection set forth above has been continued.

Applicant argues that the results set forth in the present application are unrelated to thermal stability. The examiner does not understand this argument since the claims specifically set forth that the impact modifier is specifically added for heat resistance.

Applicant also argues that the results demonstrate a synergistic relationship between the impact modifier and stabilizers. Applicant argues that there is no difference pointed to in Gallucci of the combination of three stabilizers as opposed to any two stabilizers. Applicant argues that there are a number of compositions that do not fall within the combinations set forth in the present claims. As set forth above, the examiner finds these arguments persuasive in light of the results shown in Table 3 of the specification as related to phosphite stabilizers, but not persuasive when the claims are directed to phosphonite stabilizers.

Applicant argues that the examiner has improperly used the claimed invention as a roadmap. The examiner disagrees in view of the comments made above and in view of the fact that Gallucci prefers combinations of the named three stabilizers. In addition, applicant's argument's and the results set forth in the specification are not persuasive with respect to phosphonite stabilizers.

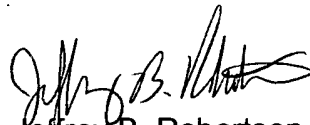
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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (571) 272-1092. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeffrey B. Robertson  
Primary Examiner  
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JBR